

**REMARKS/ARGUMENTS**

***Status of the Application***

In the office action, claims 1-10 and 13 were rejected. In the present Amendment, claim 7 has been canceled and claims 1, 8, and 13 have been amended. Claim 1 has been amended to include the limitations of claim 7. Claims 1 and 13 have been amended to limit the substrate to metals. Support for this amendment can be found on page 7, lines 7-8, of Applicants' Specification. Claim 8 has been amended to change dependency to claim 1. Thus, claims 1-6, 8-10, and 13 are pending. No new matter was added.

***Rejections Under 35 U.S.C. § 103(a)***

Claims 1-6 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DE-A-197 57 082 in view of Takeda et al. (U.S. Patent No. 4,615,915). Because claim 1 has been amended to include the limitations of claim 7, Applicants will address these rejections with those for claim 7.

Claims 1-6, 9-10, and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DE-A-197 57 082 in view of Richard (U.S. Patent No. 5,091,211). Because claim 1 has been amended to include the limitations of claim 7, Applicants will address these rejections with those for claim 7.

Claims 7-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DE-A-197 57 082 in view of Takeda et al. or Richard in further view of Brehm et al. (U.S. Patent No. 5,596,043). Applicants respectfully traverse these rejections. In responding to the rejections, Applicants will indicate pinpoint citations in U.S. Patent No. 6,531,188, equivalent to DE-A-197 57 082, for convenience only. Applicants do not admit that U.S. Patent No. 6,531,188 is prior art.

The Examiner asserts that DE-A-197 57 082 discloses all of the limitations of claim 1 except the limitation of having one phosphoric acid group and the limitation inserted from claim 7. In addition to this missing limitation, Applicants respectfully submit that DE-A-197 57 082 fails to disclose with specificity the reactive diluent component of Applicants' claimed process. DE-A-197 57 082, while disclosing coatings with reactive diluents, merely recites a laundry list of monounsaturated, diunsaturated, and polyunsaturated reactive diluents (col. 3,

lines 15-31 of U.S. Patent No. 6,531,188). Diunsaturated reactive diluents are preferred (col. 3, lines 32-35 of U.S. Patent No. 6,531,188), unlike in Applicants' claimed process where unsaturated monocarboxylic acid esters, specifically (meth)acrylic acid ester with cycloaliphatic alcohols, are required. Considering the teaching of DE-A-197 57 082 as a whole, Applicants respectfully submit that one of ordinary skill in the art would not select (meth)acrylic acid esters with cycloaliphatic alcohols as a reactive diluent when instructed that dipropylene glycol diacrylate, tripropylene glycol diacrylate, and hexandiol diacrylate are preferred reactive diluents.

Additionally, neither DE-A-197 57 082 nor Takeda et al. supply the requisite suggestion to modify or combine the documents to produce Applicants' claimed process. "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP § 2143.01. Specifically, Takeda et al. disclose the use of thermosetting resins as primers (see col. 3, lines 29-33). There is no suggestion in Takeda et al. that the thermosetting resins disclosed therein are compatible with a high-energy radiation curing process. The coatings in DE-A-197 57 082, contrarily, are all high-energy radiation curable compositions with optional chemically curable binders (col. 4, lines 26-32 of U.S. Patent No. 6,531,188). The mere fact that the thermosetting resins of Takeda et al. may be combined with the optional chemically curable binders of DE-A-197 57 082 does not lead to the conclusion that the thermosetting resins are combinable with the high energy radiation curable compositions. Thus, neither document contains the requisite suggestion to combine as required to establish a *prima facie* case of obviousness.

Even if DE-A-197 57 082 and Takeda et al. can be combined, the combination would merely disclose a chemically curable binder with phosphoric acid esters as accelerants. Claim 1 is directed to a process wherein the filler layer composition cures by high-energy radiation. The Examiner concluded, contrary to the claim limitations, that the optional chemically curable compositions of DE-A-197 57 082 were equivalent to Applicants high-energy curable

compositions because “[t]he temperatures generated on the coating by means of the UV irradiation (UV flash lamp) are generally sufficient to cure the additional cross-linkable binders.” However, “[c]laims must be given their broadest reasonable interpretation.” MPEP § 2111 (emphasis added). Here, the Examiner seems to have unreasonably expanded the claim scope to support a section 103(a) rejection by concluding that the thermosetting resins of Takeda et al. combined with the optional chemically curable coatings of DE-A-197 57 082 disclose Applicants’ claimed process. Regardless of whether heat from a UV lamp can cure the optional chemically curable compositions of DE-A-197 57 082, Applicants’ claimed process simply does not cure thermally. While Applicants recognize that their coatings may contain optional binders that cure thermally (pg. 8, lines 7-15 of Applicants’ Specification), these optional binders have no bearing on the claim 1 requirement of curing a filler layer composition by high-energy radiation. Thus, Applicants respectfully submit that the combination of DE-A-197 57 082 and Takeda et al. fails to teach or suggest every element of claim 1 as is required to establish a *prima facie* case of obviousness. See MPEP § 2143.03.

Applicants further submit that DE-A-197 57 082 cannot be combined with Richard to produce Applicants’ claimed process. Richard is directed to the manufacture of vinyl floor and wall coverings and teaches the use of methacryloyl-modified phosphoric acid derivatives in UV curable topcoats. These topcoats are based on acrylated polyurethanes with improved adhesion of topcoats on vinyl resin layers, preferably in the form of vinyl floors. Applicants have amended claim one to limit the substrates to metal substrates. Thus, one of ordinary skill in the art would not combine DE-A-197 57 082 with a document directed towards vinyl floor and wall coverings to produce a process directed at coating metal substrates. Furthermore, it is questionable whether vinyl floor and wall coverings are an analogous art to repair coatings of metal substrates as is required before a reference can be included in the prior art available for an obviousness rejection. See MPEP § 2141.01(a).

In addition to the above arguments that will not be repeated, Applicants submit that Brehm et al. cannot be combined with the aforementioned documents. Brehm et al. disclose a coating agent for scratch-free coatings on thermoplastic substrates (col. 6, lines 33-35) comprising monofunctional reactive


thinners in coatings suitable for roll application (col. 5, lines 46-47). There is no suggestion in Brehm et al. or any of the aforementioned documents that the monofunctional reactive thinners disclosed in Brehm et al. can be utilized in coatings for metal substrates. Furthermore, the coatings in Brehm et al. can only be applied in a thickness of 1-50  $\mu\text{m}$  (col. 6, line 66 – col. 7, line 1). A coating thickness above 50  $\mu\text{m}$  can lead to cracking when the coating is subjected to flexural stress (col. 7, lines 3-4). Coatings produced by Applicants claimed process have no such limitation (see, e.g., Example 3 of Applicants' Specification demonstrating a coating thickness of 150  $\mu\text{m}$ ).

Because claims 2-6, 8-10, and 13 are dependent claims, which recite even further limitations to the claim that has already been traversed, Applicants rely upon the arguments presented above in rebuttal to the Examiner's assertion that the dependent claims are unpatentable over the aforementioned documents.

### ***Summary***

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance and such action is requested. In order to expedite disposition of this case, the Examiner is invited to contact Applicants' representative at the telephone number below to resolve any remaining issues. Should there be a fee due which is not accounted for, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,

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